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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,897	08/28/2003	Kouji Yamada	4041K-000150	8694
27572	7590	03/31/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			MORILLO, JANEL COMBS	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 03/31/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/650,897	Applicant(s) YAMADA ET AL.	
	Examiner Janelle Combs-Morillo	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 8-11, 13-15 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12, 16-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/25/03</u> , <u>1/27/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims are objected to because of the following informalities: . Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sperry (US 3,765,877).

Sperry teaches a high strength aluminum casting alloy comprising (in weight%): 7-20% Si, 0.1-0.6% Mg, 0.1-1% Ag, 3.5-6% Cu (abstract), up to 0.7% Mn (column 2 line 50-51), up to 1.5% Fe (column 2 lines 59), which overlaps the presently claimed alloying ranges. Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. Because the prior art of Sperry teaches an overlapping alloy composition, then it is held that Sperry has created a prima facie case of obviousness of the presently claimed invention.

Concerning claims 3 and 6, Sperry teaches casting at high temperatures of 1250-1500°F, solution heat treating at 850-975°F (454-524°C) for 1-40 hrs, and aging at 300-500°F (149-260°C) for 1-24 hrs (column 1 lines 60-67). Concerning the gas included in the aluminum alloy casting, Sperry does not mention a significant amount of gas is contained in said alloy.

Concerning claim 7, though Sperry does not specify the sizes of eutectic Si, and various other compounds in said alloy product, because Sperry teaches substantially overlapping alloying ranges, as well as an overlapping heat treatment, then substantially the same microstructural characteristics are expected to occur. The examiner asserts that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. The prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985), see MPEP 2112.01.

4. Claims 2, 4, 5, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sperry in view of Rogers (US 5,484,492).

Sperry is discussed in paragraphs above.

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Sperry does not mention the addition of modifier to said Al-Si casting alloy. However, Rogers teaches that modifiers are added to Al-Si alloys in order to control the primary Si segregation and growth (column 10 lines 25-26). Such modifying additions include: Sr, Na, K, Ce, Y, Lanthanide series elements (column 10 lines 19-34). It would have been obvious to one of ordinary skill in the art to add a modifier as taught by Rogers to the Al-Si alloy taught by Sperry, because Rogers teaches that modifiers are added to Al-Si alloys in order to control the primary Si segregation and growth (column 10 lines 25-26).

Concerning claims 4, 18, and 20, Sperry teaches casting at high temperatures of 1250-1500°F, solution heat treating at 850-975°F (454-524°C) for 1-40 hrs, and aging at 300-500°F (149-260°C) for 1-24 hrs (column 1 lines 60-67). Concerning the gas included in the aluminum alloy casting, Sperry does not mention a significant amount of gas is contained in said alloy.

Concerning claim 21, though Sperry does not specify the sizes of eutectic Si, and various other compounds in said alloy product, because Sperry teaches substantially overlapping alloying ranges, as well as an overlapping heat treatment, then substantially the same microstructural characteristics are expected to occur (see related arguments above).

5. Claims 12, 16, 17, 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sperry and Rogers and in further view of Ichinose et al (US 5,993,576).

Neither Sperry nor Rogers specify forming said Al-Si-Cu alloy into a scroll for a compressor of an air conditioner. However, it would have been obvious to one of ordinary skill in the art to form the Al-Si-Cu alloy taught by Sperry into a variety of automotive/ mechanical/ electrical parts, because Ichinose teaches that substantially similar Al-Si-Cu alloys are formed into wear resistant scrolls having excellent fatigue strength and toughness (column 2 lines 1-3).

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Concerning claims 16, 17, 24, and 25, it is held to be within the scope of the prior art to form said Al-Si-Cu alloy into a vane rotor or brake housing, because the combination of Sperry, Rogers, and Ichinose teaches a Al-Si-Cu alloy that can be formed into a variety of automotive parts, electric appliances, and mechanical parts (Ichinose column 2 lines 10-11).

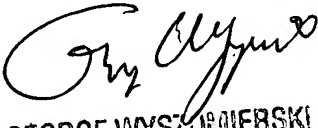
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCM 
March 22, 2006


GEORGE WYSZOWSKI
PRIMARY EXAMINER
GROUP 1700